

BEST AVAILABLE COPY

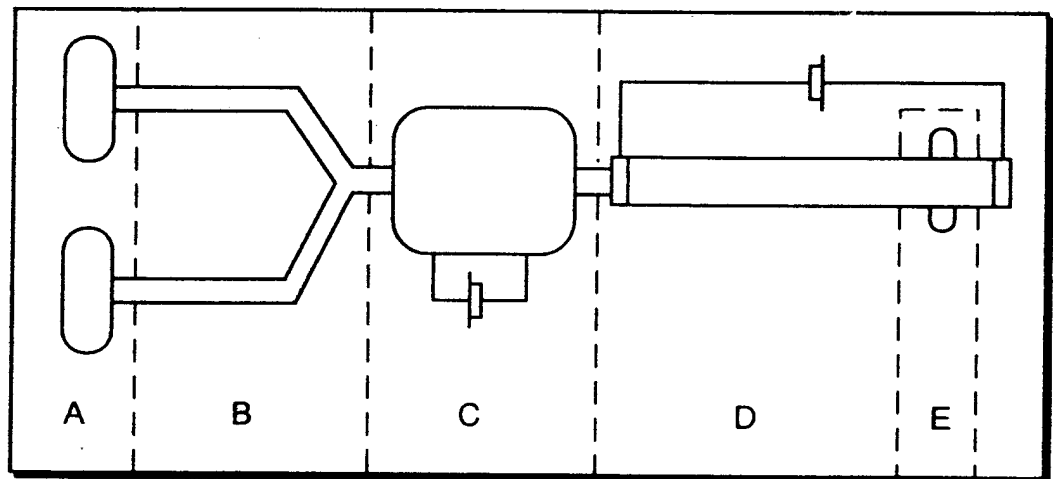


FIG. 1

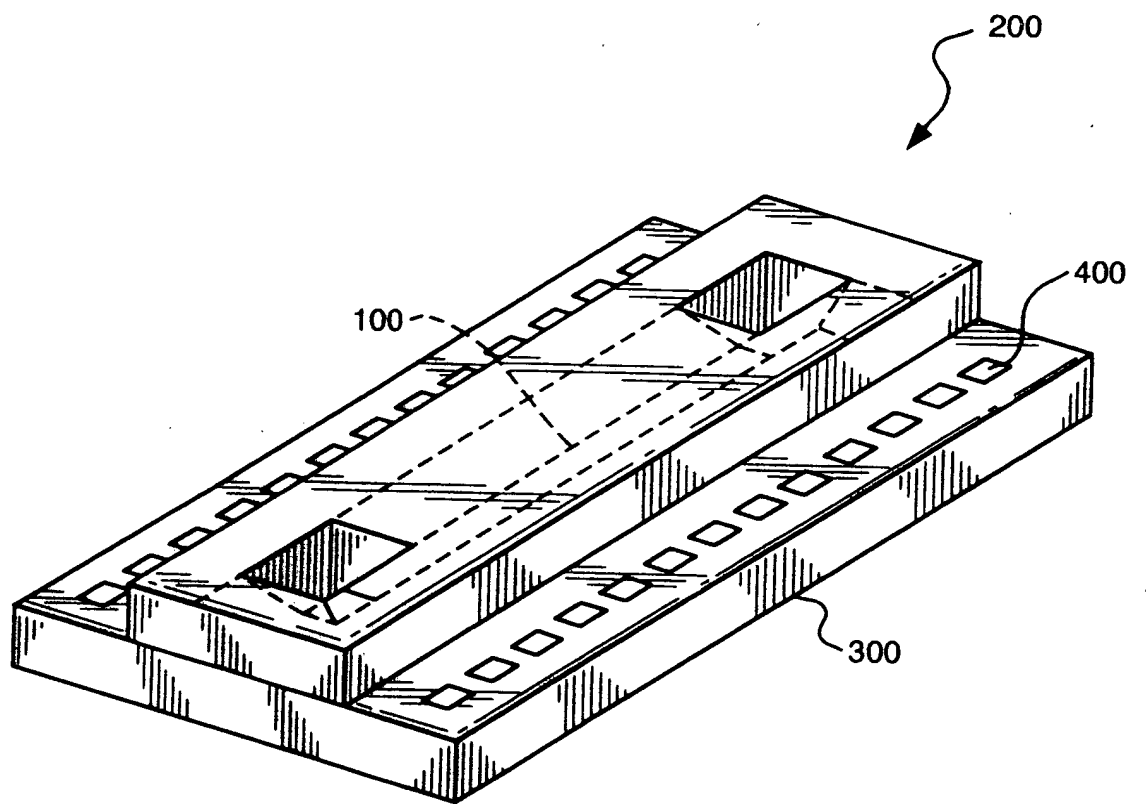


FIG. 2

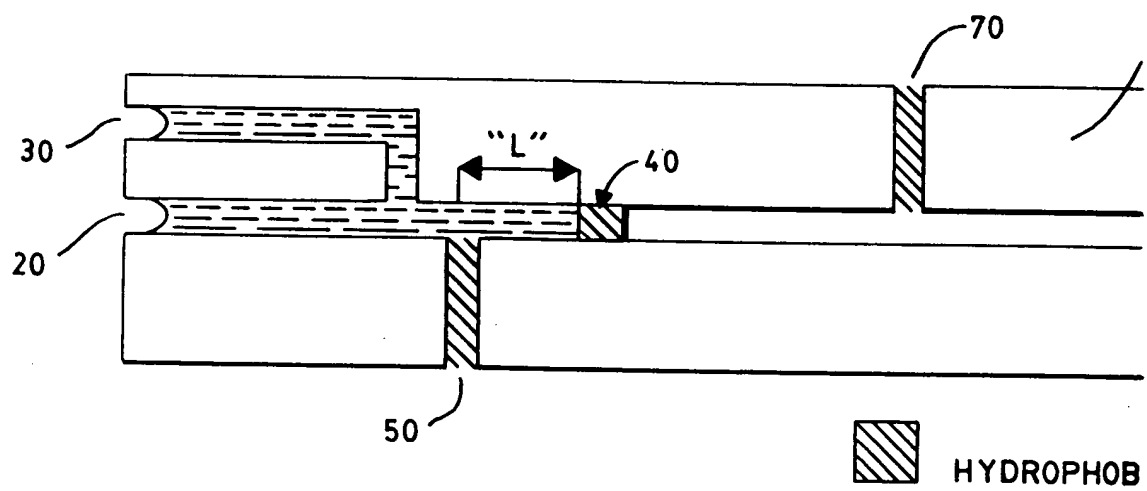
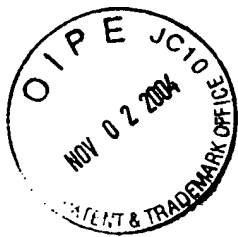


FIG. 3A



Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 4 of 33

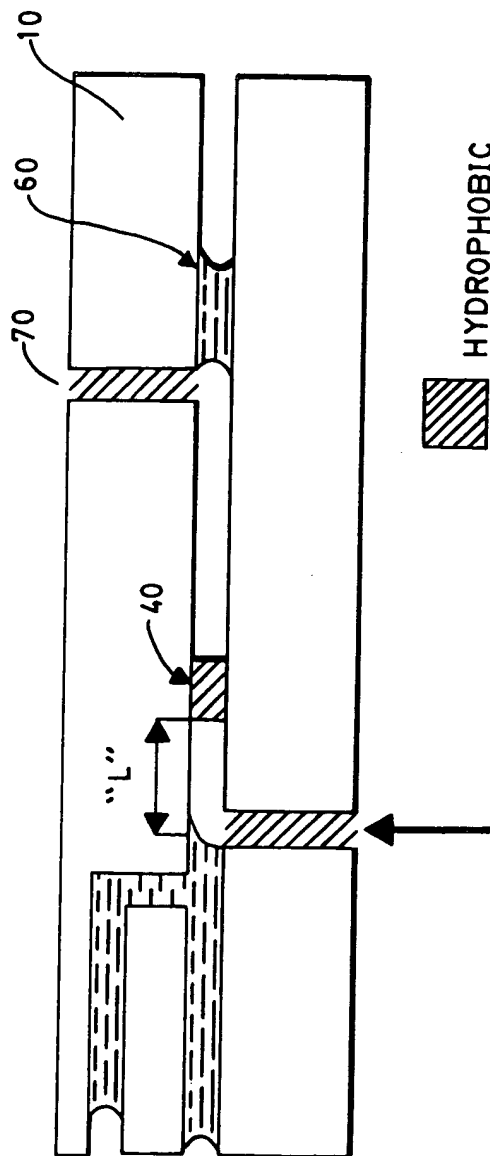


FIG. 3B

NOV 02 2004  
PATENT & TRADEMARK OFFICE

Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 5 of 33

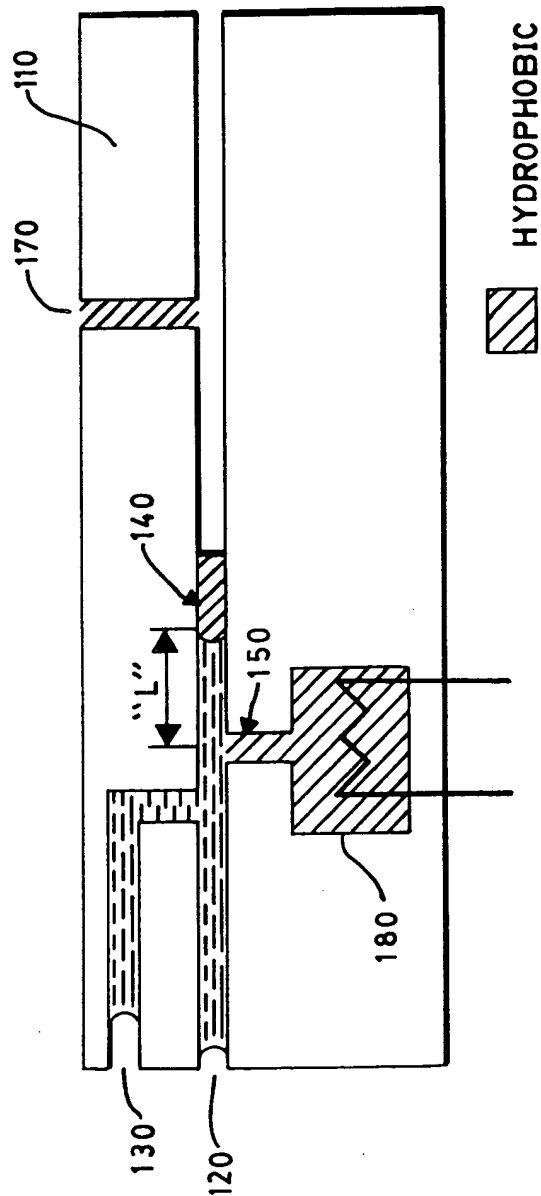
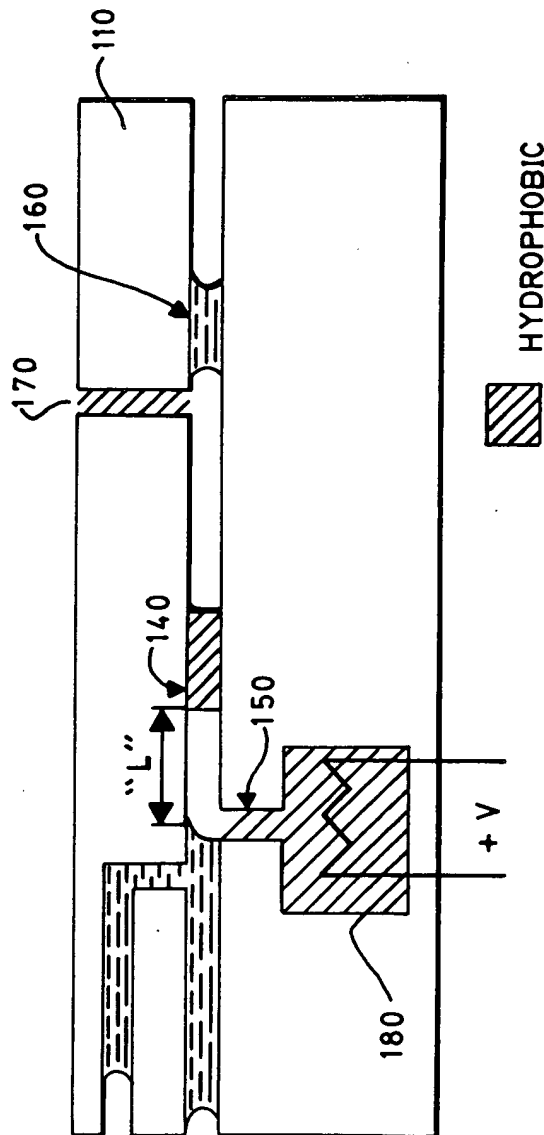
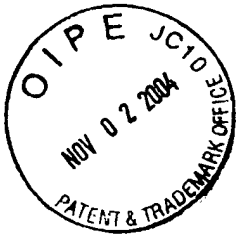


FIG. 4A



Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 6 of 33





Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 7 of 33

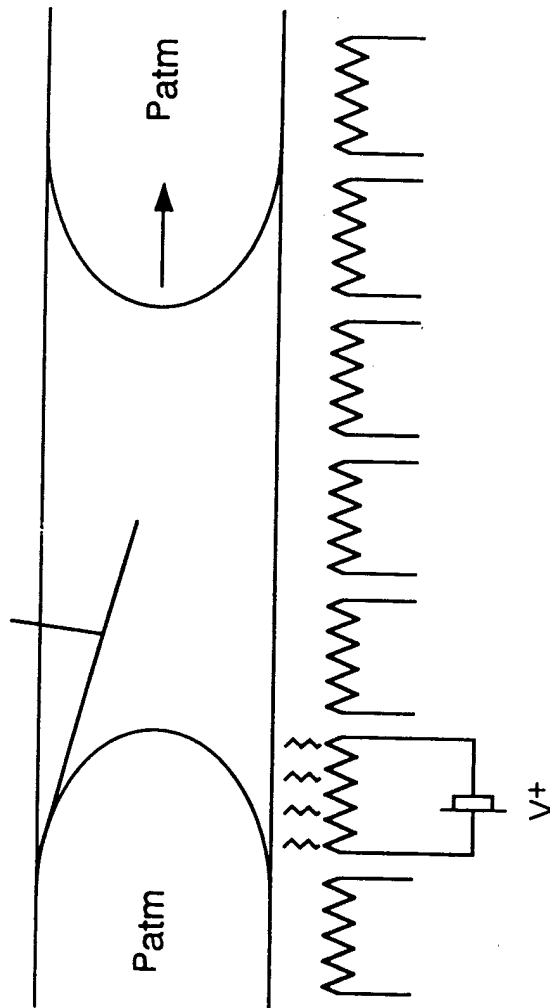


FIG. 5

110204

31 U.S. PTO

FIG. 6A

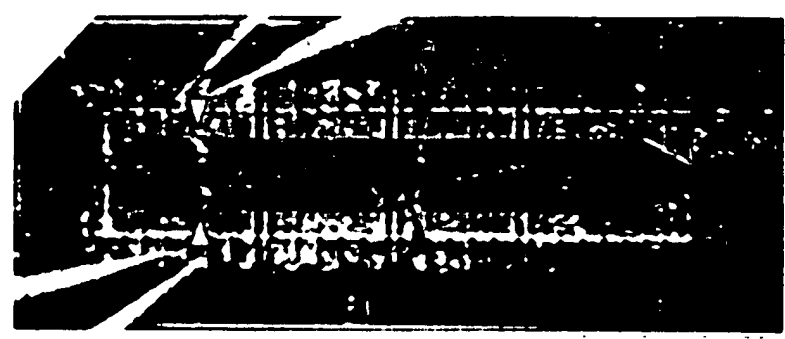


FIG. 6B

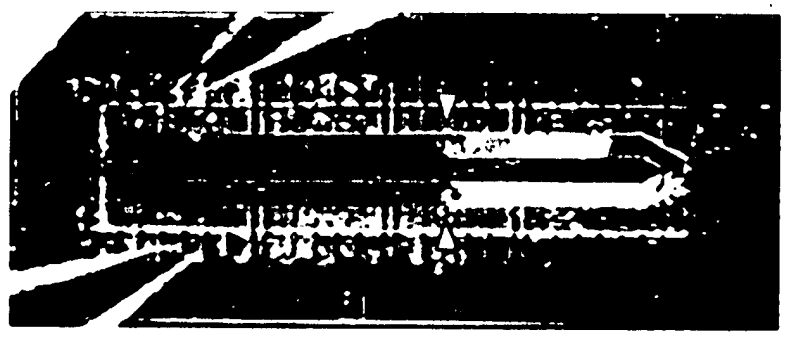


FIG. 6C

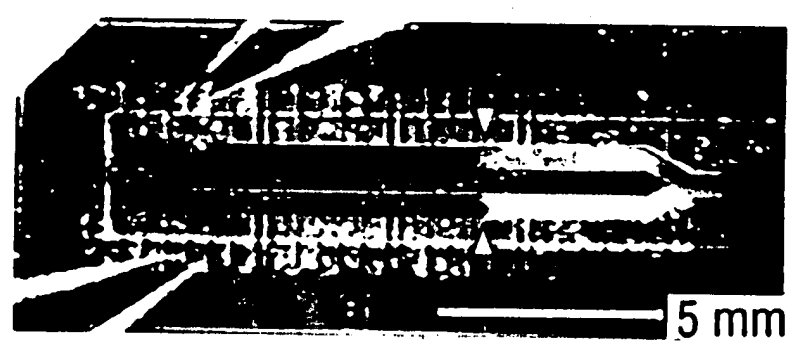
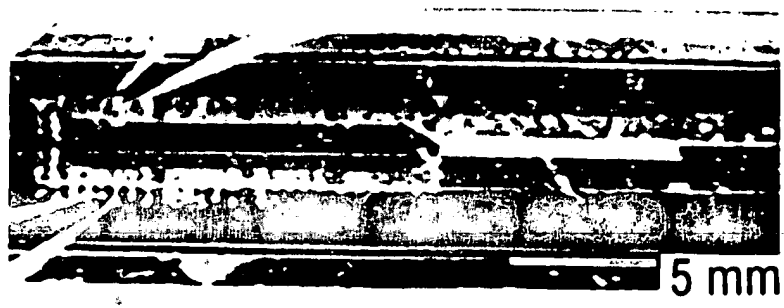


FIG. 6D





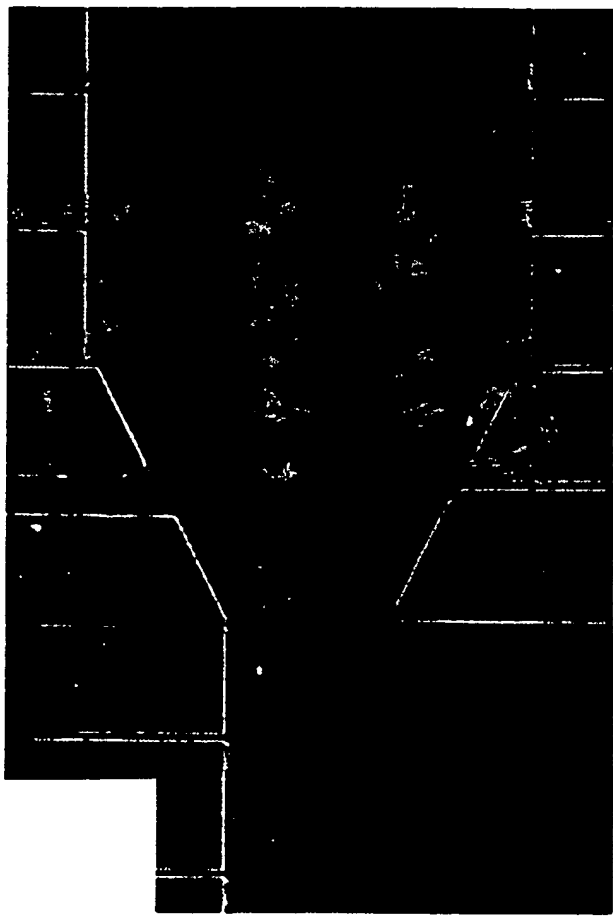


FIG. 7A

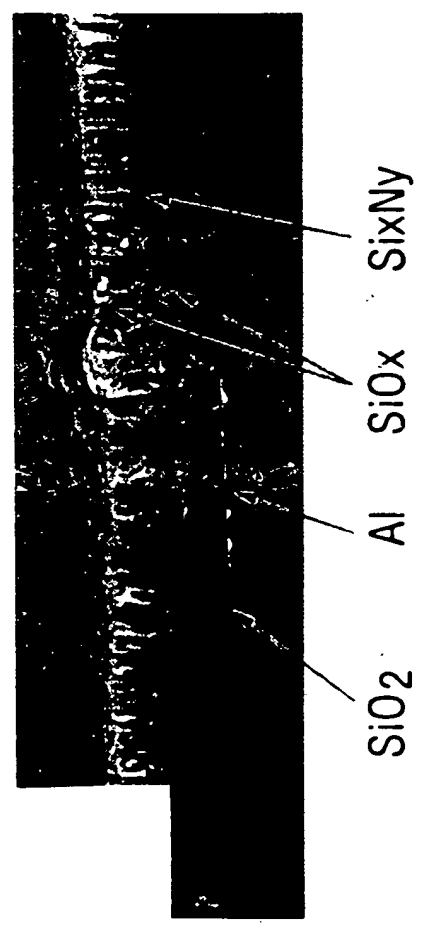


FIG. 7B



Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 10 of 33

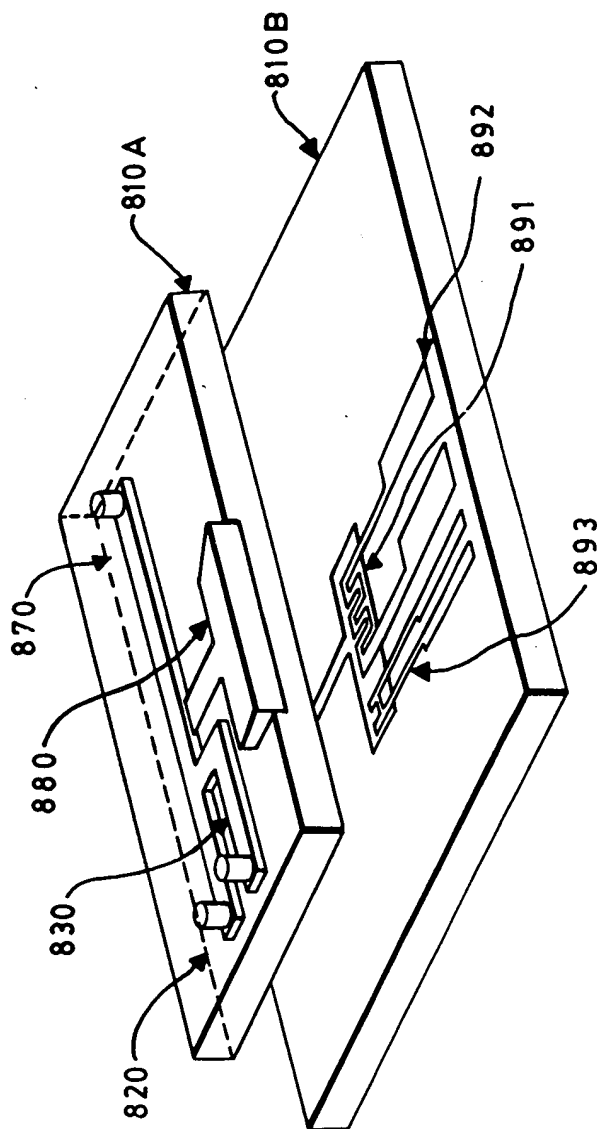
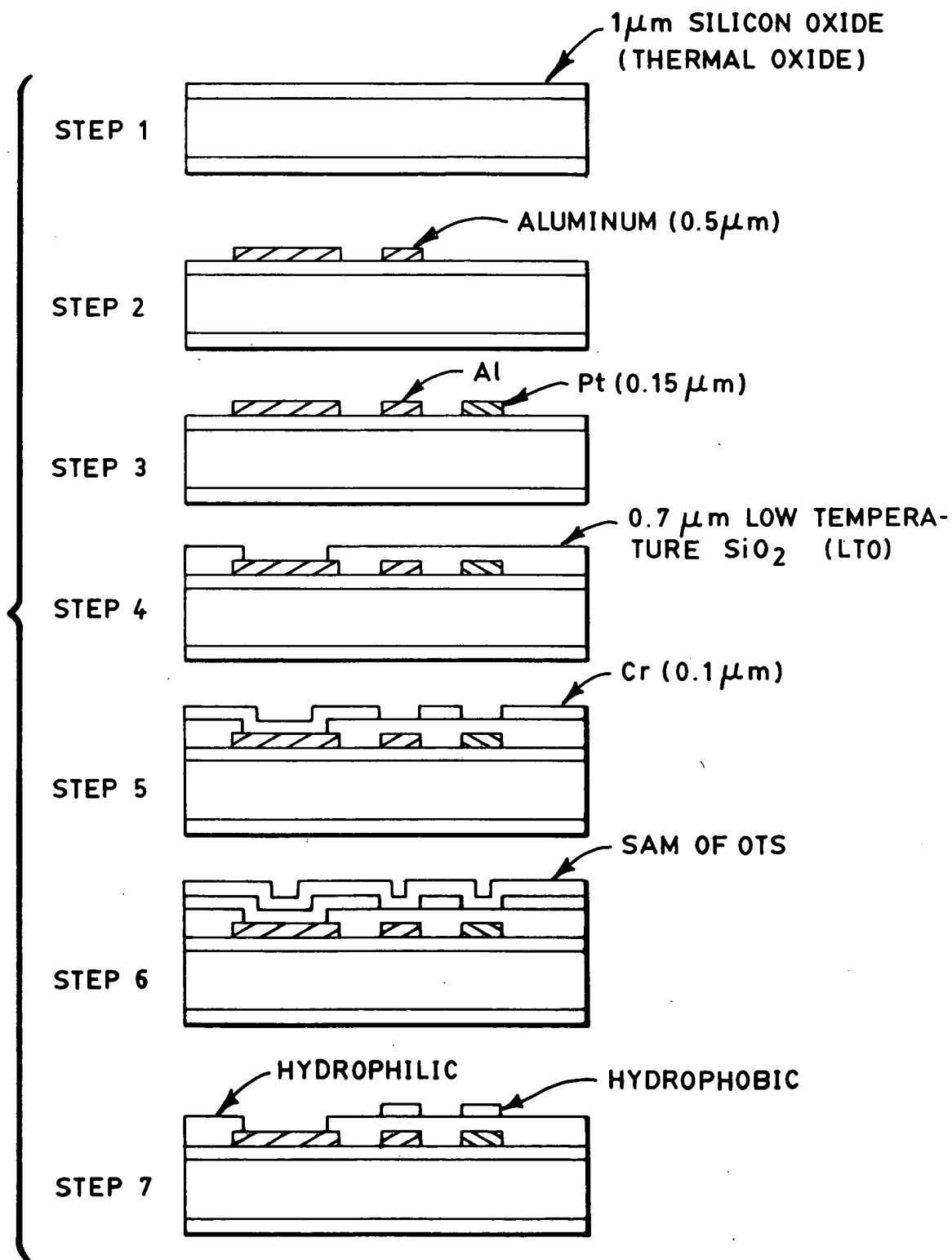
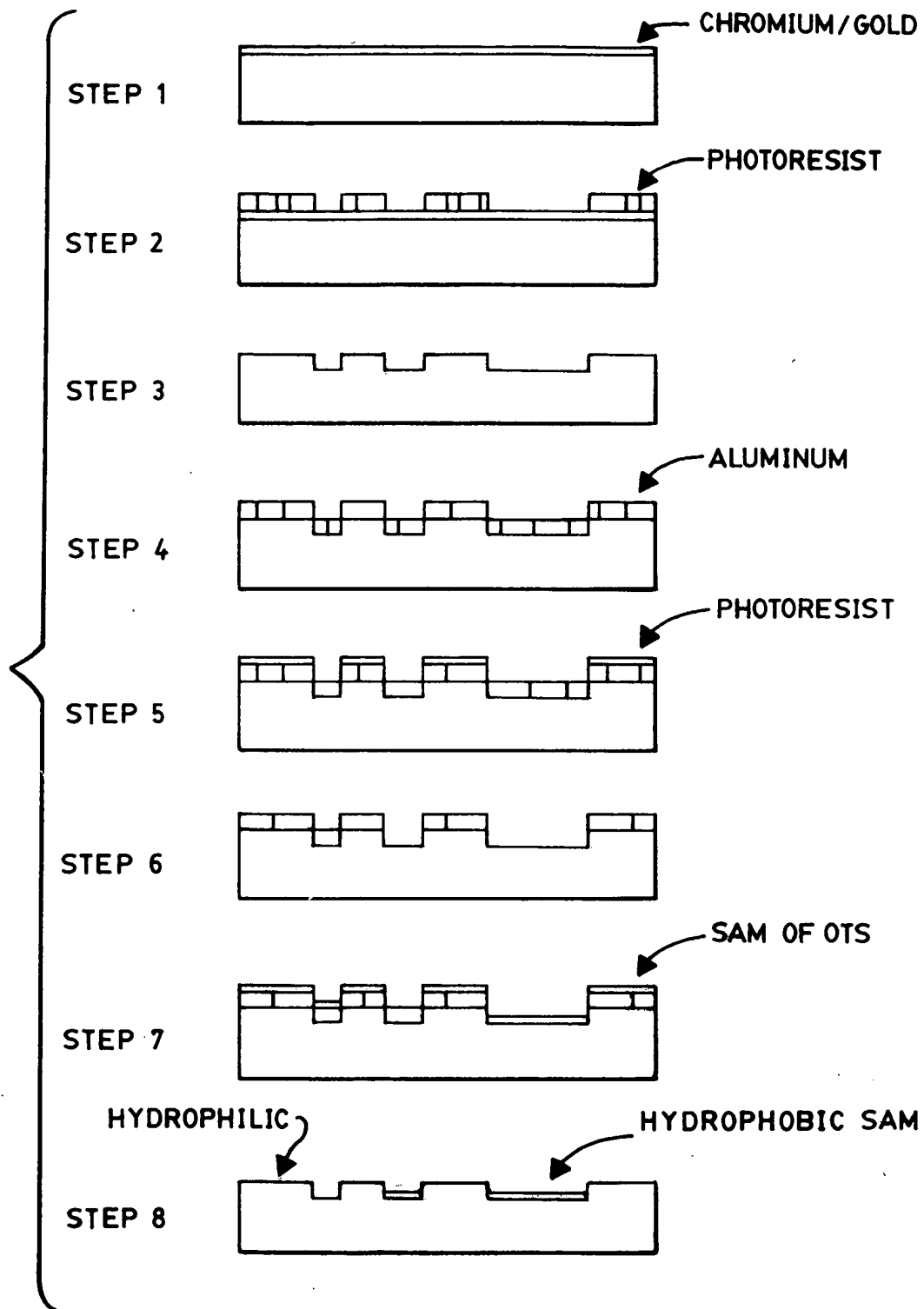


FIG. 8A



**FIG. 8B**



**FIG. 8C**

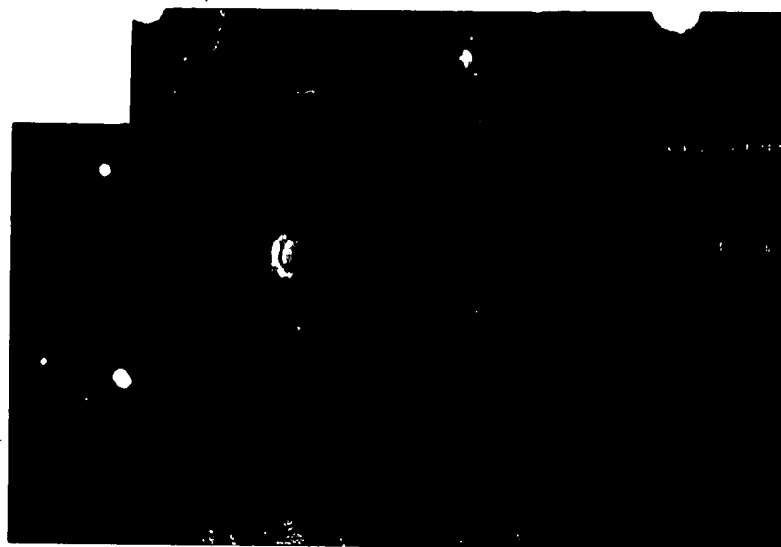


FIG. 9A

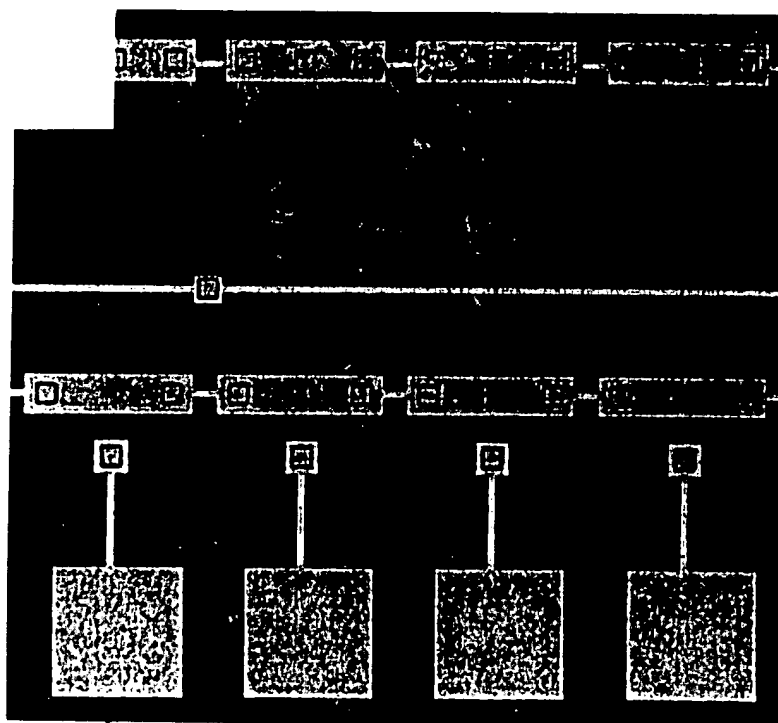


FIG. 9B

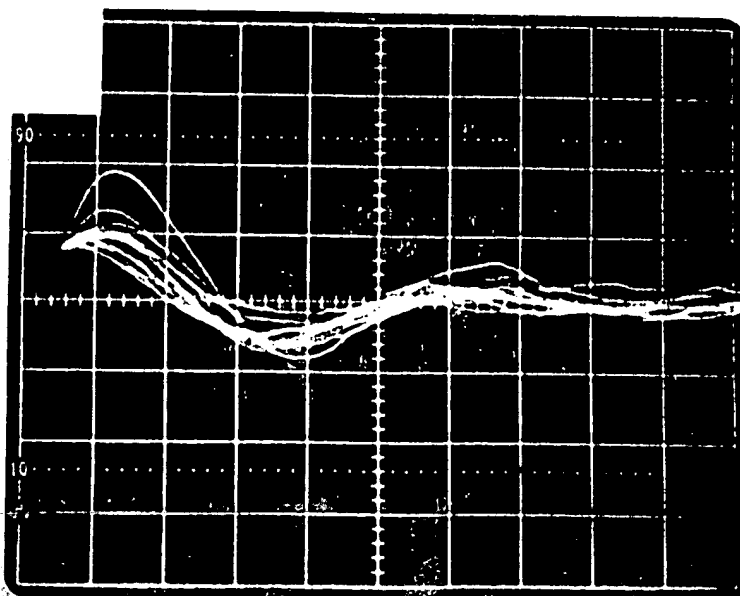


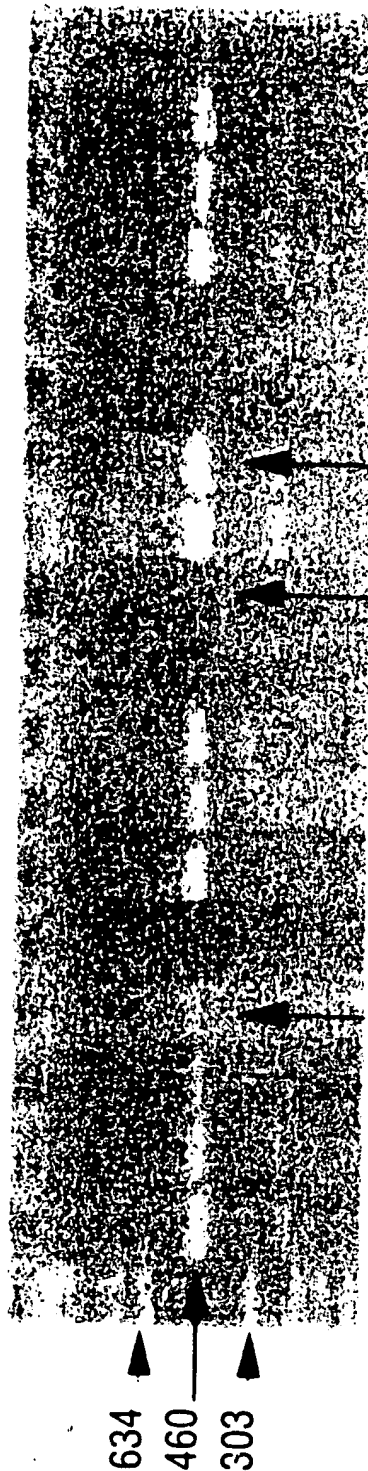
FIG. 9C



3351 U.S. PTO

Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 14 of 33

LIQUID NAILS GLUE  
BOND-ALL GLUE  
GOOP GLUE  
RUBBER CEMENT  
CURED SILICONE SEALER  
UV GLUE  
VACUUM GREASE  
SILICONE SPRAY  
POLYAMIDE  
RUBBER GASKET  
REACTION VIAL PLASTIC  
STAINLESS STEEL THERM.  
WIRE THERMOCOUPLE  
CRUSHED SILICON  
SILICON WAFER  
CRUSHED GLASS  
GLASS CAPILLARY  
CONTROL  
LADDER

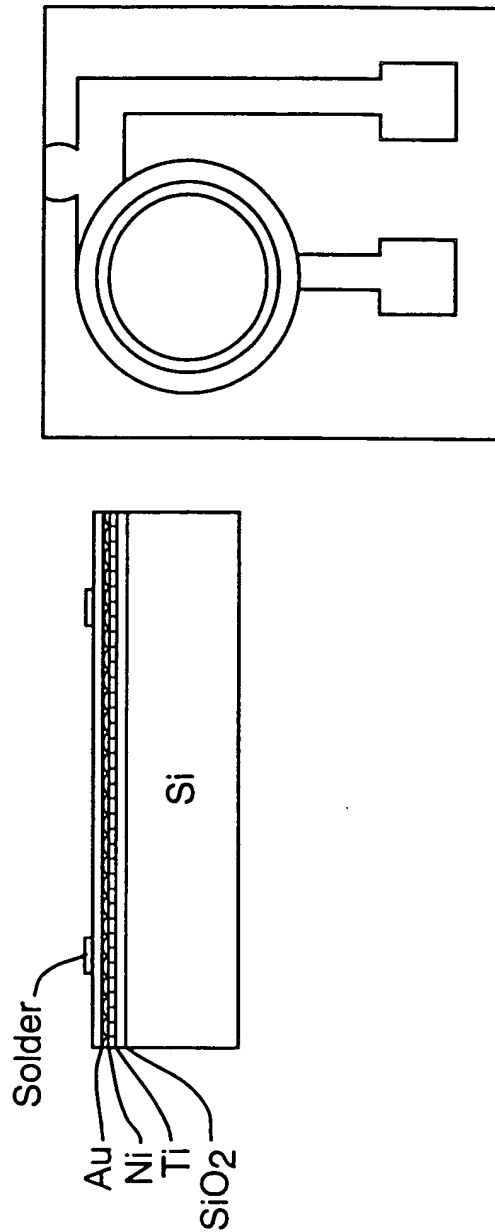


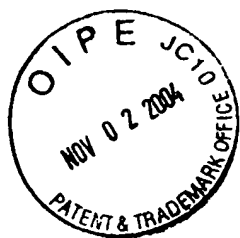
PCR RESULTS WITH STANDARD REAGENT AMOUNTS

**FIG.10**

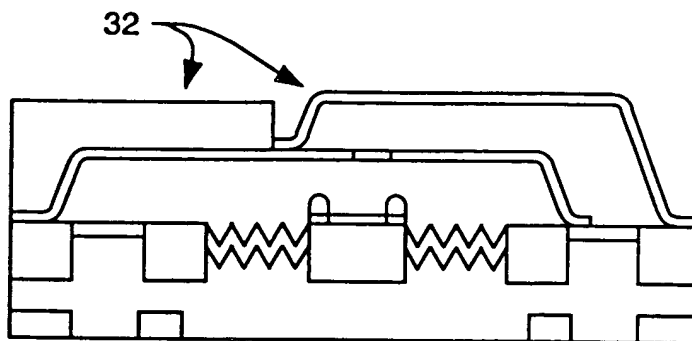


Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 15 of 33

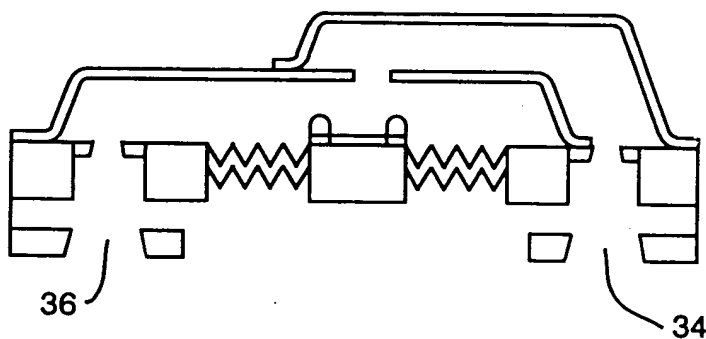




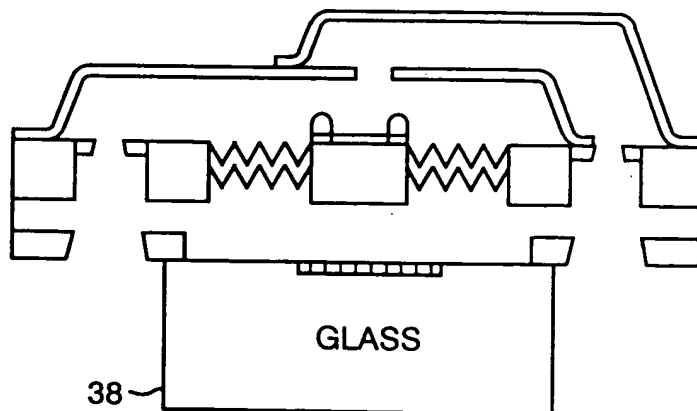
Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 18 of 33



**FIG. 12 H**



**FIG. 12 I**



**FIG. 12 J**





Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 17 of 33

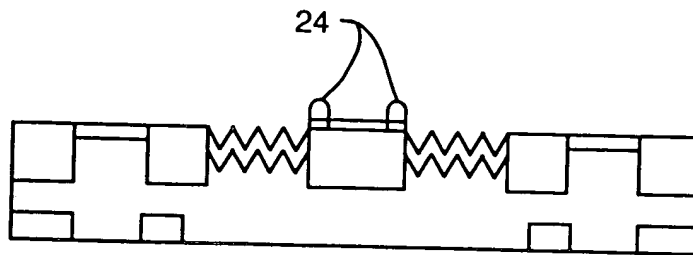


FIG. 12E

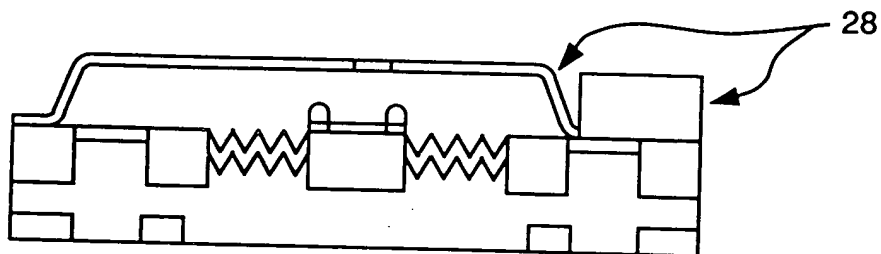


FIG. 12F

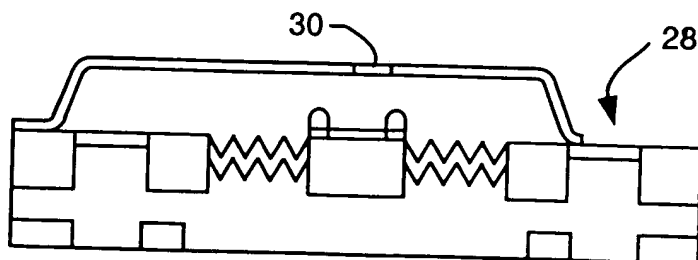
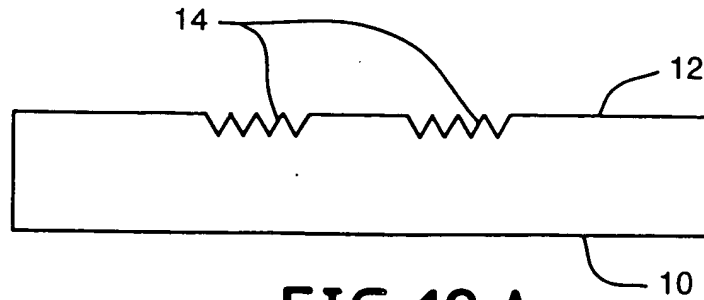
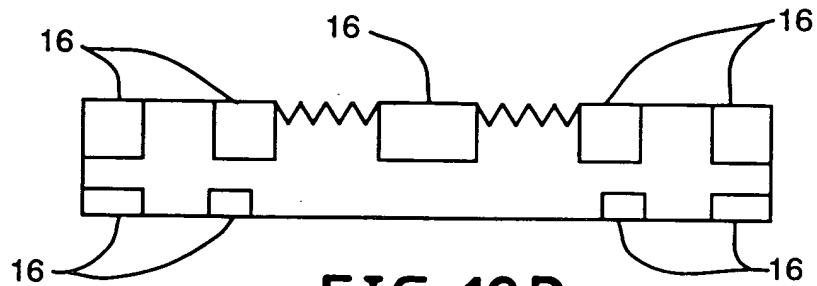


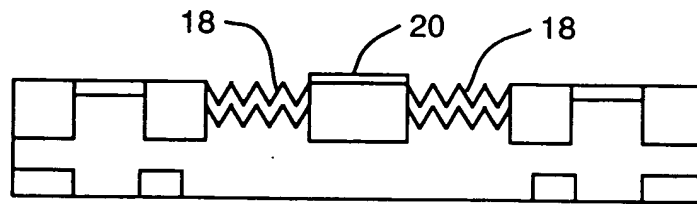
FIG. 12G



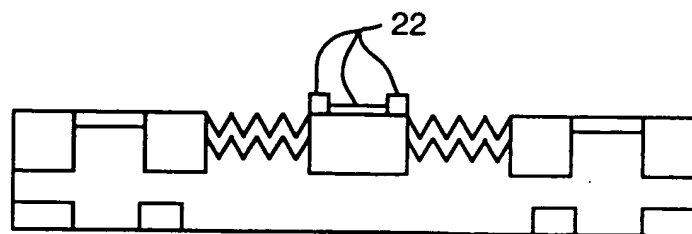
**FIG. 12 A**



**FIG. 12 B**



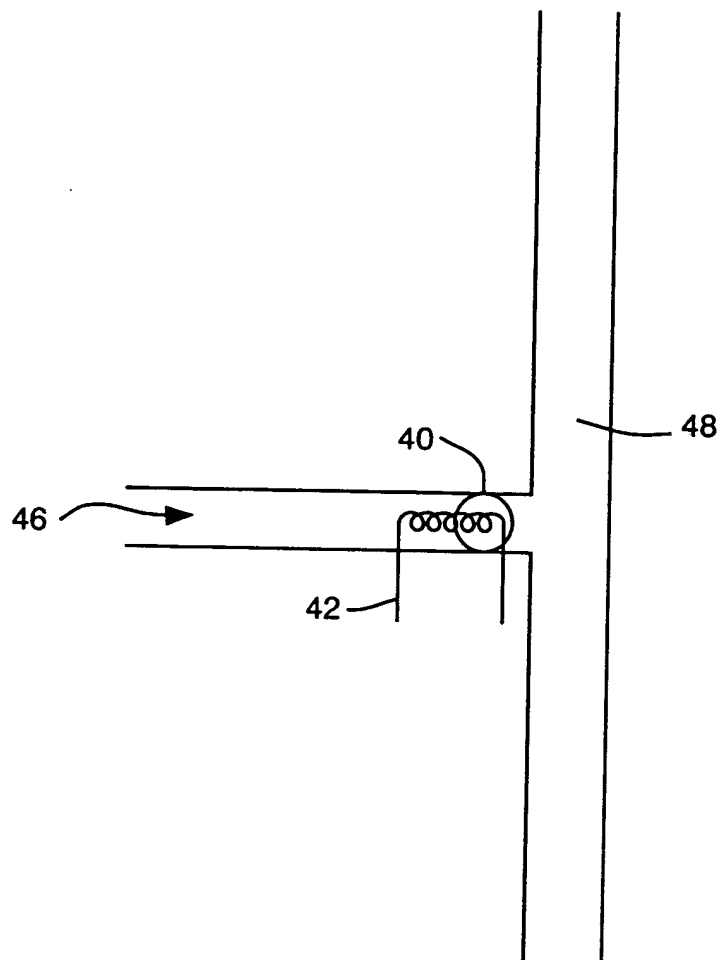
**FIG. 12 C**



**FIG. 12 D**



Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 19 of 33



**FIG.13**

18351 U.S. PTO  
110204

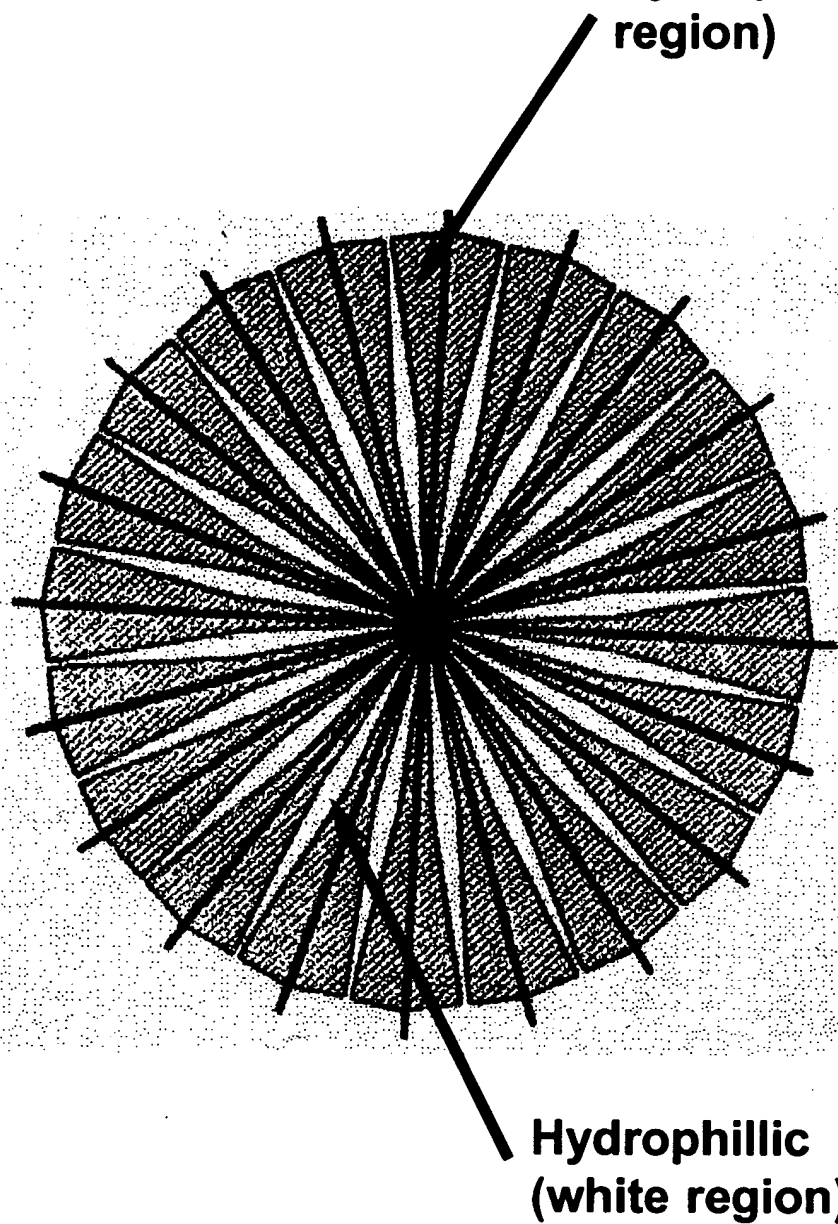
Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 20 of 33



FIG. 14

18351 U.S. PTO  
110204

**Hydrophobic (grey  
region)**



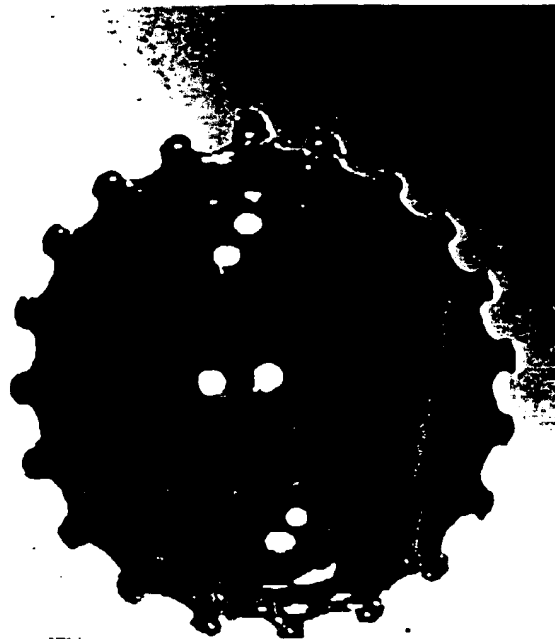
**FIG. 15A**



110204

18351 U.S. PTO

Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 22 of 33



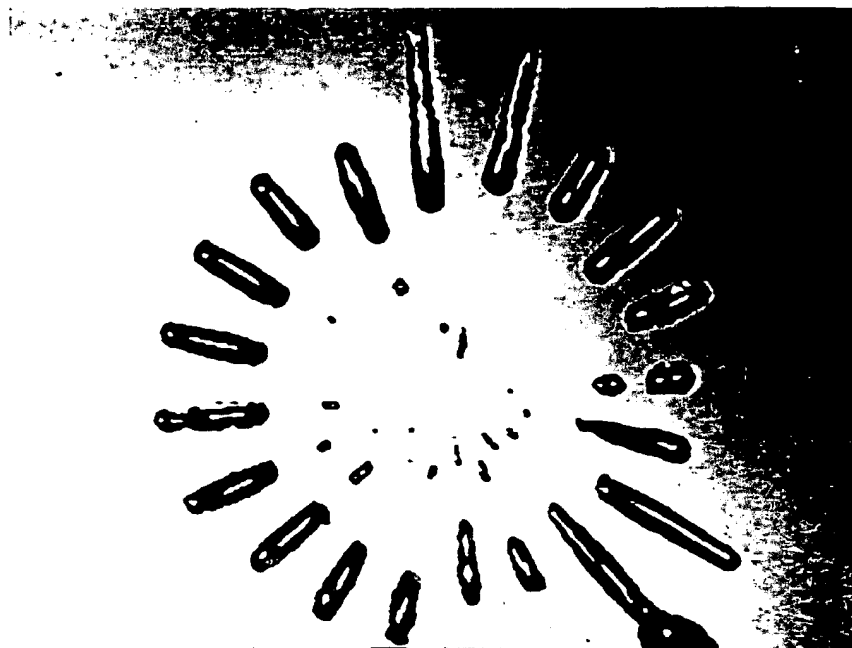
**FIG. 15B**



110204

18351 U.S. PTO

Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 23 of 33



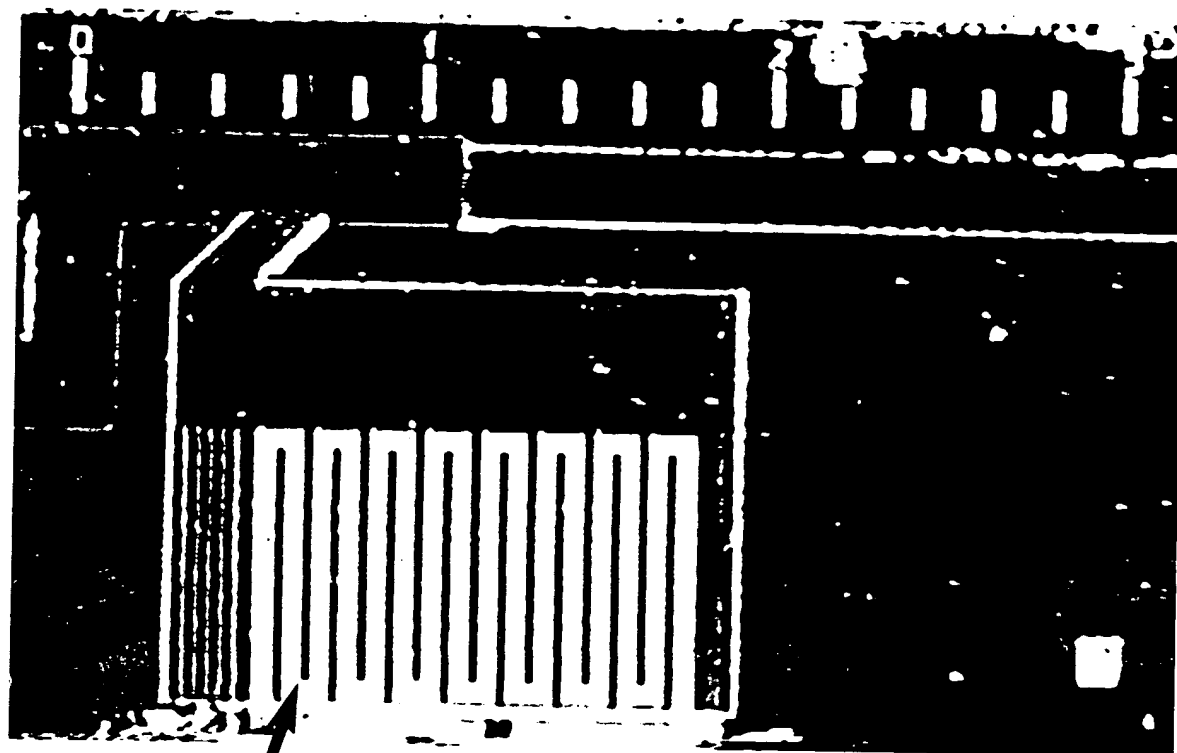
**FIG. 15C**



110204

18351 U.S. PTO

Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 24 of 33

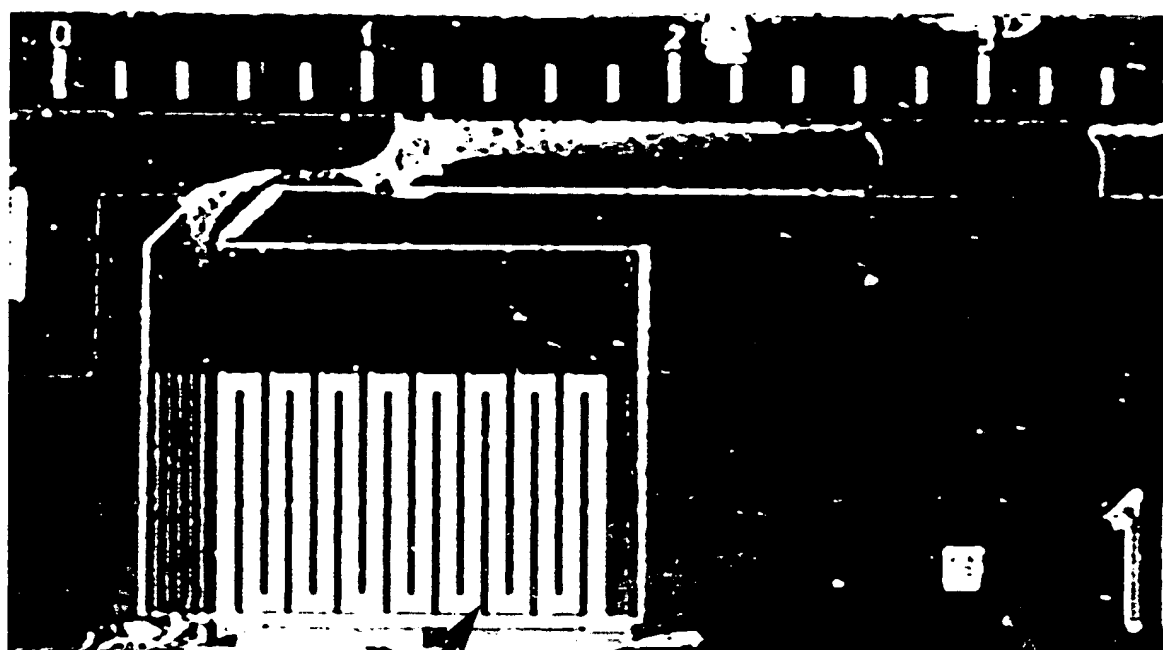


991

**FIG. 16A**



18351 U.S. PTO  
110204



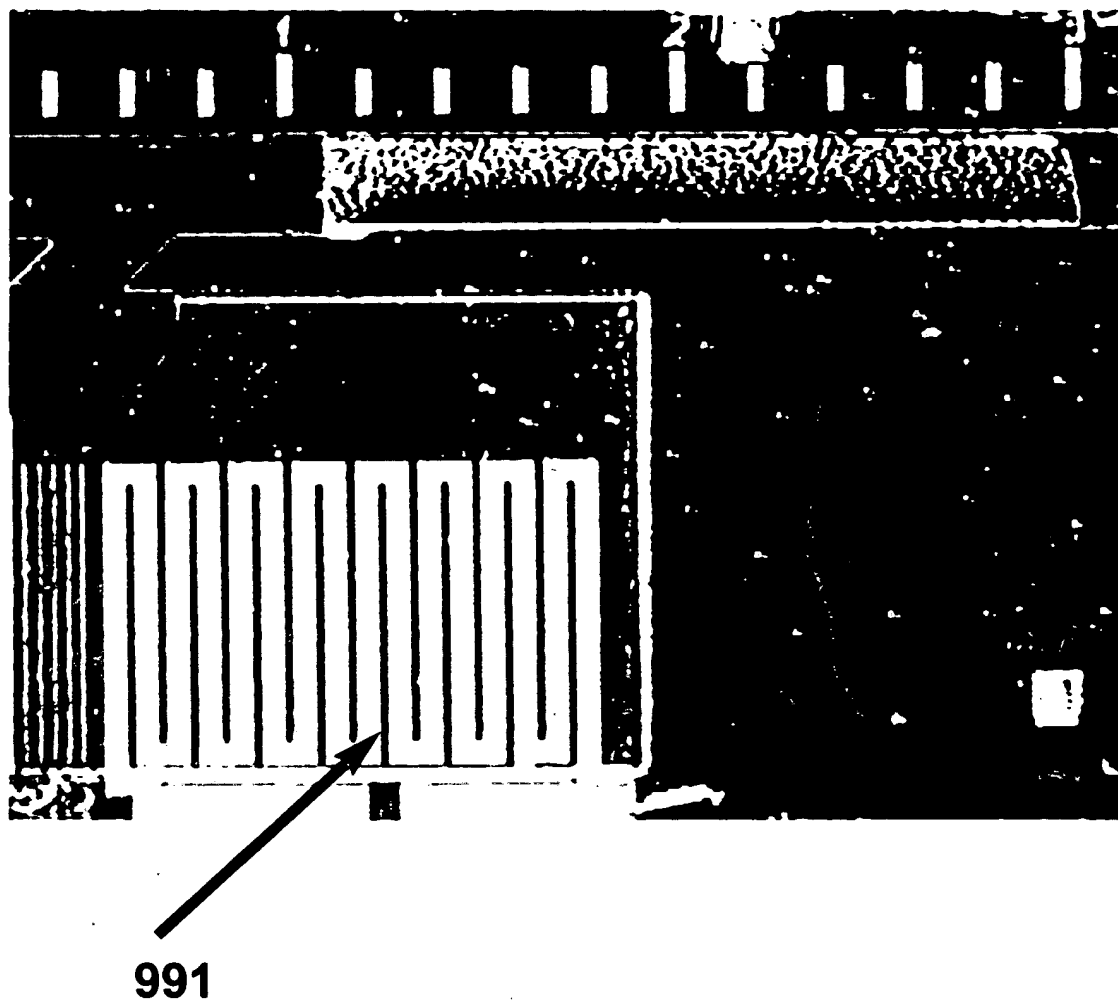
991

**FIG. 16B**



18351 U.S. PTO

Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 26 of 33



**FIG. 16C**



110204

18351 U.S. PTO

Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 27 of 33



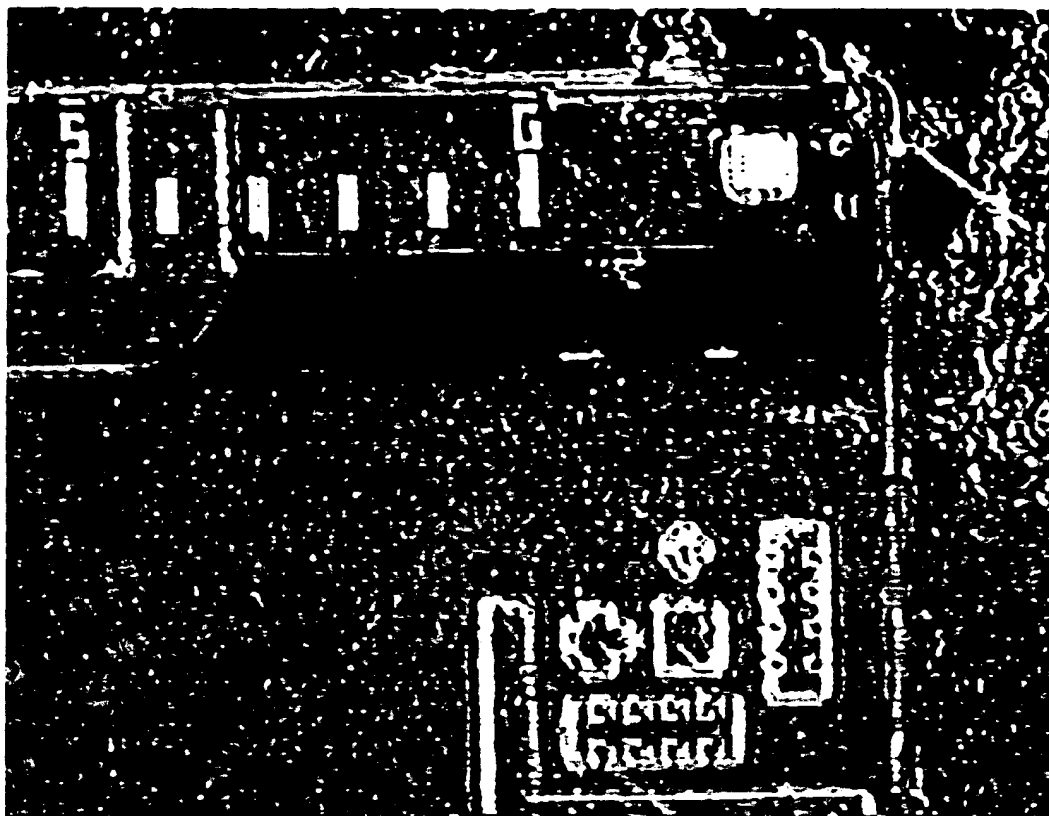
**FIG. 16D**



110204

18351 U.S. PTO

Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 28 of 33



**FIG. 16E**



Serial No.: 09/518,895      Filed: 03/06/00  
Examiner: J. Ludlow      Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228      Sheet 33 of 33

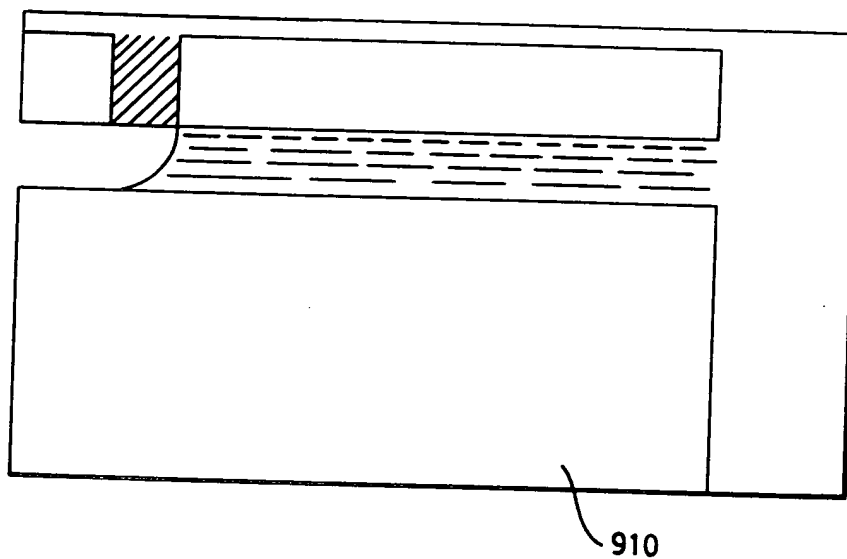
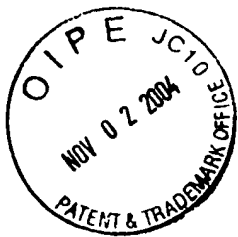


FIG. 16 J



Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 32 of 33

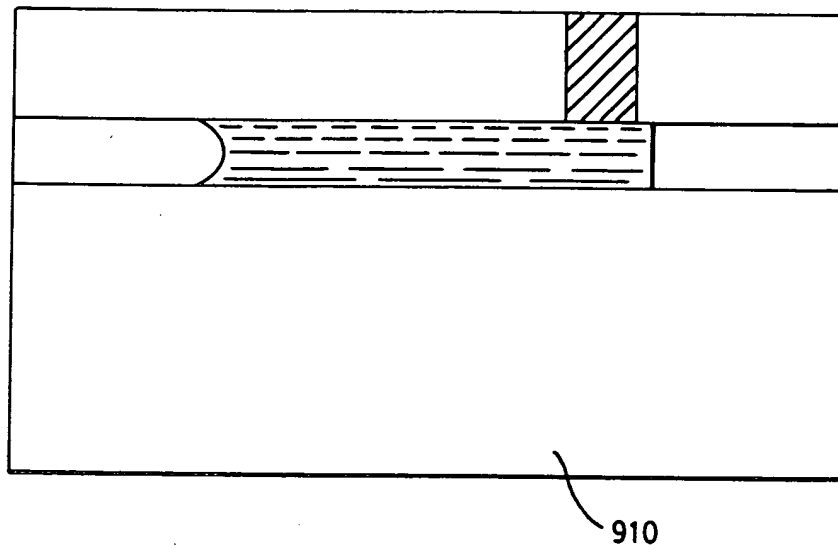
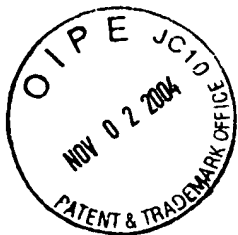


FIG. 16I



Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 31 of 33

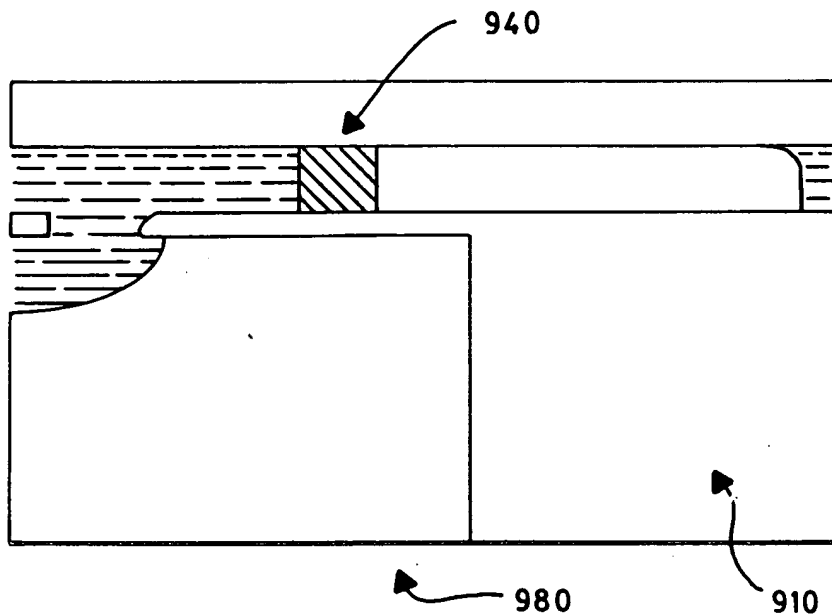
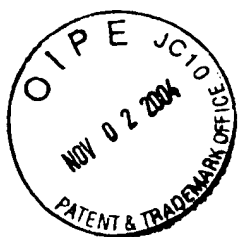


FIG. 16 H



Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: **Moving Microdroplets**  
Atty. Docket No.: UM-04228 Sheet 30 of 33

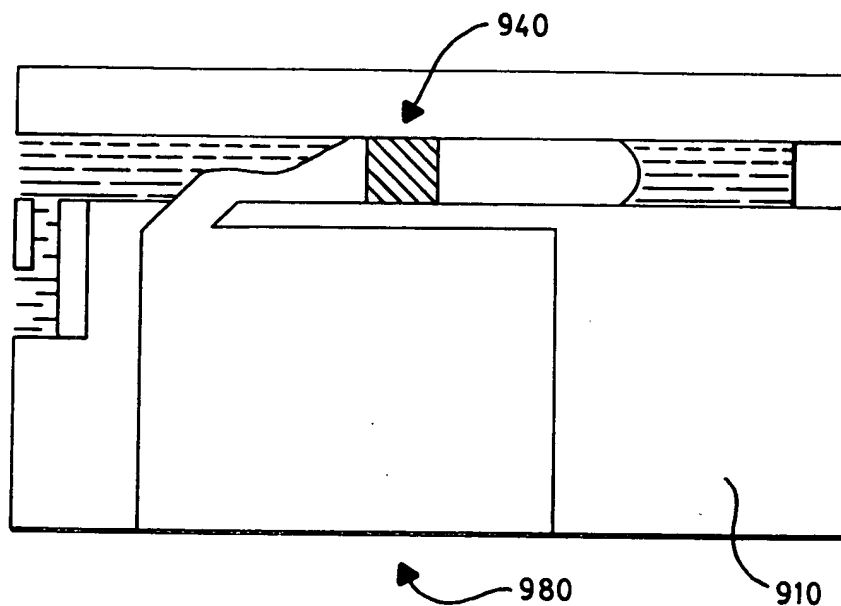


FIG. 16 G





Serial No.: 09/518,895 Filed: 03/06/00  
Examiner: J. Ludlow Group Art Unit: 1743  
Applicant: Kalyan Handique *et al.*  
Title: Moving Microdroplets  
Atty. Docket No.: UM-04228 Sheet 29 of 33

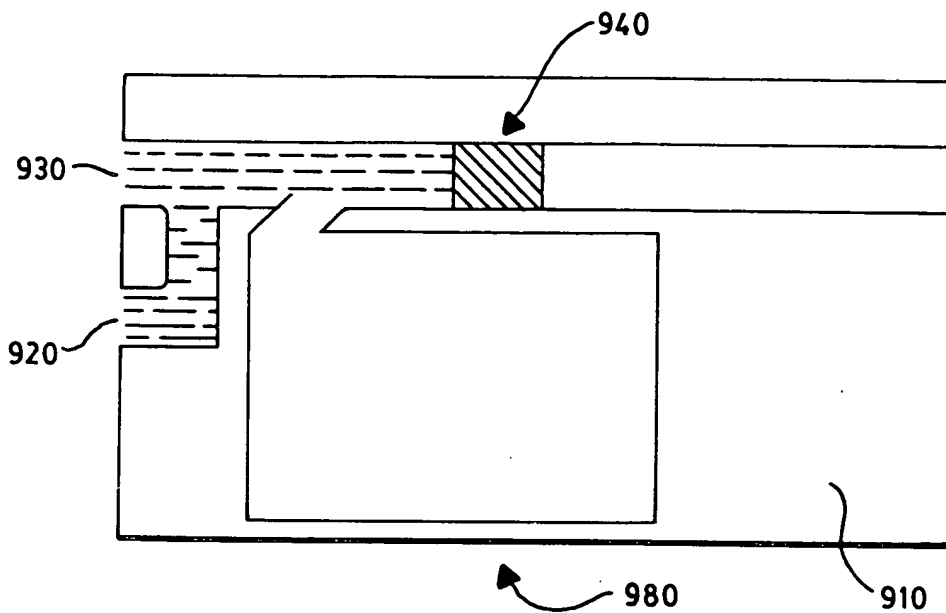


FIG. 16 F

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**